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ABSTRACT

This report is based, in part, on a conference that examined the implications of virtual schools for public education. It also draws on other studies of online education to highlight issues that policymakers should consider when developing virtual schools. The document presents three major findings: (1) Virtual schools are an important tool for expanding opportunities in public education if states implement them carefully; (2) virtual schools should serve as a supplement to and not a replacement for a comprehensive public-school education; and (3) virtual schools funded with public money should be held accountable to the same broad principles and policies as other forms of public education, including academic outcomes, equity, and religious neutrality. The report provides an overview of the growth of virtual schools, the features of virtual schools, and the benefits and limitations of virtual education. It pays special attention to the need to implement virtual schools while preserving the essential principles of public education, which are to prepare students for citizenship, for work, and for life. To achieve these goals, it suggests that social interactions be built into online education, that there be universal access, that equity and nondiscrimination be a part of virtual education, and that there be public accountability and religious neutrality in online education. The conference agenda and list of participants are appended. (RJM)

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Preserving Principles of Public Education in an Online World.

Kathleen Fulton

November 2002

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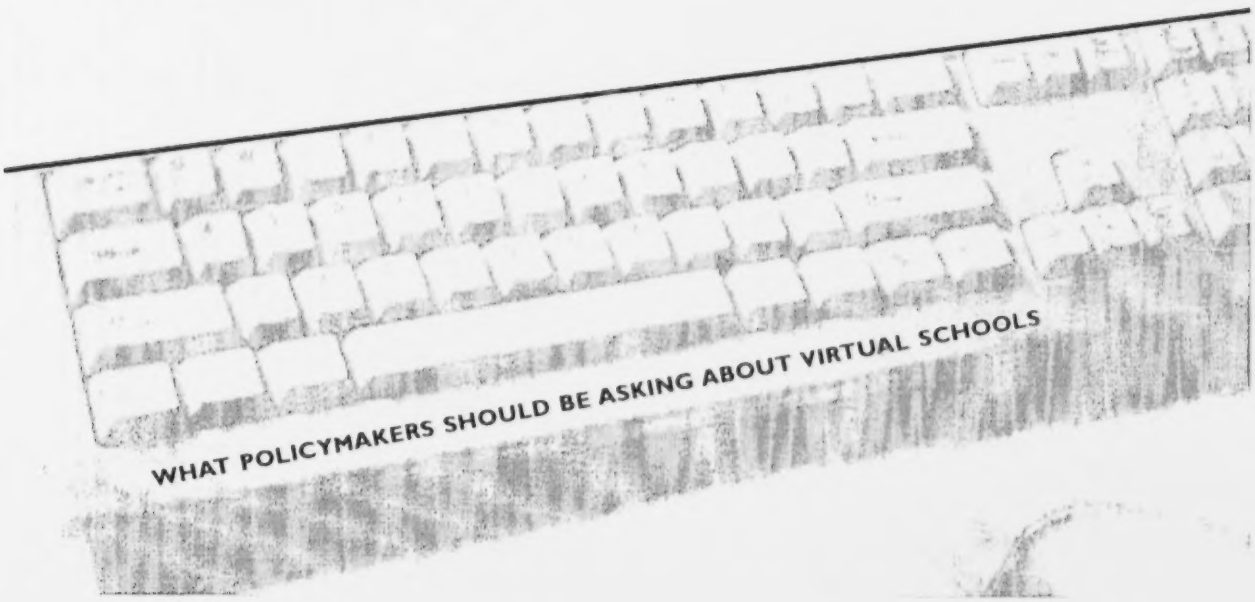

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Based in Washington, D.C., and founded in 1995 by Jack Jennings, the Center on Education Policy is the national independent advocate for public education and for more effective public schools. The Center works to help Americans better understand the role of public education in a democracy and the need to improve the academic quality of public schools. We do not represent any special interests. Instead, we help citizens make sense of the conflicting opinions and perceptions about public education and create conditions that will lead to better public schools.

The Center on Education Policy receives nearly all of its funding from charitable foundations. The Center is particularly grateful to the Bill & Melinda Gates Foundation and the William and Flora Hewlett Foundation, whose support made it possible to hold a conference on virtual schools and produce this report. We would like to thank our program officers at those foundations, David Ferrero and Marshall (Mike) Smith respectively, for their assistance and guidance with this project.

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CONTENTS

Action Summary for Policymakers

Preserving Long-Held Principles in a Virtual World 1
Purpose of This Report 1
Table A: Key Questions That Policymakers Should Ask about Education Reforms 2
Major Findings 2
Recommendations 3

I. Virtual Schools and Enduring Principles

Challenges of Change 7
The Invitational Conference 7

II. An Overview of Virtual Schools

Growth of Virtual Schools 9
Features of Virtual Schools 9
Benefits of Virtual Education 10
Limitations of Virtual Education 11
Sponsors of Online Schools 11

III. Implementing Virtual Schools While Preserving Essential Principles of Public Education

Effective Preparation for Life, Work, and Citizenship 13
Social Cohesion and Shared Culture 16
Universal Access and Free Cost 17
Equity and Non-Discrimination 20
Public Accountability and Responsiveness 22
Religious Neutrality 23

Conclusion 24

Appendix

Agenda 25
List of Conference Participants 27

Action Summary for Policymakers

Virtual schools—educational organizations that offer courses through the Internet—are rapidly becoming part of the landscape of American education. Largely unknown a decade ago, the phenomenon of online education for secondary, middle, and even elementary school students has been fueled by the growth of computers with Internet access in schools and homes. States, local school districts, regional consortia, higher education institutions, nonprofit organizations, and private vendors today offer a smorgasbord of courses and services, many of which are organized into entities called "schools." These virtual schools include many of the basic components found in "face-to-face" education, including teachers, administrators, and guidance counselors; textbooks, schedules, and course assignments; and other instructional resources.

PRESERVING LONG-HELD PRINCIPLES IN A VIRTUAL WORLD

Most policy discussions about virtual schools focus on how this new mode of education is changing the delivery, structure, governance, or funding of education. Less attention is paid to how these changes could affect the deeper purposes and principles underlying the U.S. system of public education—in other words, the expectations and ideals that have shaped the American vision of public education for more than a century. These include such purposes as preparing students for life, work, and citizenship, and creating a cohesive society; and such principles as providing universal access and equity in education, and making schools responsive to their local community.

Virtual education is a prime example of a fast-moving trend that could have a major impact on these purposes and principles. Virtual schools are calling into question longstanding ideas about the definition of a public school, the social goals of public education, and local control of public education.

As a national independent advocate for effective public schools, the Center on Education Policy (CEP) encourages policymakers to have an *explicit* conversation about how virtual schools—or any other far-reaching education reform—will affect the fundamental purposes and principles of public education. CEP supports changes that will help students learn better, but we also believe these changes should be implemented with full awareness of their impact on fundamental principles. This kind of dialogue will help policymakers determine which purposes and principles are worth keeping and preserve them, even in the midst of dramatic change.

To stimulate these types of conversations, CEP has generated a set of key questions, shown in Table A, that policymakers should ask about major education reforms. These questions are grouped according to a list of six essential purposes and principles of public education developed by CEP after talking with many citizens.

PURPOSE OF THIS REPORT

In April 2002, the Center on Education Policy sponsored an invitational conference in Washington, D.C. on the implications of virtual schools for the fundamental purposes and principles of public education. This report is based in part on the conference presentations and discussions, but it is not a summary of the conference. Rather, it draws from the conference proceedings and other studies of online education to highlight issues that policymakers should consider when developing virtual schools. It also includes recommendations for policymakers about how to implement virtual schools in ways that will preserve essential purposes and principles of public education.

TABLE A

Key Questions That Policymakers Should Ask about Education Reforms

1) **Effective preparation for life, work, and citizenship.** Will the proposed reform produce an education of the quality needed to effectively prepare young people: (a) to lead fulfilling and contributing lives, (b) to be productively employed, and (c) to be responsible citizens in a democratic society?

2) **Social cohesion and shared culture.** Will the proposed reform promote a cohesive American society by bringing together children from diverse backgrounds and encouraging them to get along? Will it help to form a shared American culture and to transmit democratic values?

3) **Universal access and free cost.** Will the proposed reform guarantee a public education that is universally accessible to all children within the governing jurisdiction and is free of charge to parents and students?

4) **Equity and non-discrimination.** Will the proposed reform provide the same quality of education for poor children as for non-poor children? Will it treat all children justly and without discrimination based on race, ethnicity, gender, disability, religious affiliation, or economic status?

5) **Public accountability and responsiveness.** Will the proposed reform ensure that education supported with public dollars remains accountable to taxpayers and the public authorities that represent them? Will the reform be responsive to the needs of local communities and afford citizens a voice in the governance of their schools?

6) **Religious neutrality.** Will the proposed reform provide a public education that is religiously neutral and respectful of religious freedom?

MAJOR FINDINGS

Three main findings emerge from the Center's analysis of virtual schools:

- Virtual schools are an important tool for expanding opportunities in public education *if* states implement them carefully, effectively, and equitably.

- Virtual schools should serve as a supplement to and not a replacement for a comprehensive public school education. In the future, as needs change, technologies offer more flexibility, and educators gain more experience and evaluation data from virtual schooling, policymakers could reconsider whether virtual schools could provide a comprehensive education in some situations.

- Virtual schools funded with public money should be held accountable to the same broad principles and policies as other forms of public education in such areas as academic outcomes, equity, and religious neutrality. But in such areas as attendance, scheduling, and funding formulas, states will probably need to revise existing policies to make them workable for virtual schools.

RECOMMENDATIONS

The Center on Education Policy has developed several recommendations for state, local, and national leaders. Grouped by principle, these recommendations are intended to help policymakers build; support, and regulate K-12 virtual schools in ways that will maintain the essential purposes and principles of public education. Although these recommendations have been informed by our conference on virtual schools, they represent the views of CEP alone. We have also included examples of promising practices that some virtual schools are using to address the issues raised in the recommendations. (The main text of this report contains a fuller discussion of the issues underlying these recommendations.)

Effective preparation for life, work, and citizenship

- Policymakers should develop clear indicators for evaluating the quality of online education. Some of these indicators should be much the same as those used for traditional schools, such as student academic achievement, alignment of course content with state standards, course completion rates, and teacher qualifications. Others should be specific to online education, such as interactivity in course design, reliability of technology and technical support, and teachers' ability to teach in an online environment.

  - The Florida Virtual School reviews the content and assessments used in its courses to assure they are aligned with state standards. The school requires all its teachers to have Florida certification in the subjects they teach. Florida has set goals that all online courses have at least a 70 percent completion rate, that 80 percent of students earn A's or B's, and that at least 80 percent of parents of participating students indicate satisfaction with the courses.

Social cohesion and shared culture

- Policymakers should insist on frequent, regular, and timely interaction among online students, between online teachers and students, and with facilitators or on-site mentors in the home school to enhance student learning and social interaction.

  - Like many virtual schools, the Michigan Virtual High School assigns each student an on-site mentor in his or her regular public school, in this case a certified teacher who monitors the student's progress in online courses and is available for other help.

  - The Virtual High School (VHS, Inc.), created by the Hudson, Massachusetts, Public Schools and the Concord Consortium, fosters student interaction through student clubs, a student-created showcase, and a yearbook.

- State or local administrators should set a maximum number of online courses a student can take in a semester or overall to meet graduation requirements, to assure that virtual education supplements but does not supplant a comprehensive public education experience.

  - Florida Virtual School policies limit a student who is enrolled in a full-time traditional program to no more than two courses in a semester, with special exemptions for students for whom face-to-face educational alternatives are limited or impossible. (The school allows home-educated students to take their full curriculum online.)

Universal access and free cost

- Policymakers should take aggressive steps to assure that all public school students have equal access to online courses. This should include covering the cost of online courses for low-income students and making available home computers, modems, and Internet access to low-income families.

- Monte Vista Online Academy in Colorado provides computers, free of charge, to students who don't have them at home. Students can keep the computers as long as they are enrolled, and families are also reimbursed for Internet connection fees.

- States, school districts, and Web-based course developers should make sure that course content, designs, and tools meet federal accessibility standards for students with learning or other disabilities.

  - Many online schools use "Bobby," an online web accessibility gauge, to assure that web materials meet federal online accessibility requirements (http://bobby.watchfire.com/bobby/html/en/about.jsp).

- State policies should protect public school districts from losing funds to virtual charter schools or from having to pay for the participation of private or home-schooled children they would otherwise not be supporting. States that choose to include home-schooled children in publicly funded virtual schools should provide separate funding for this purpose.

  - In Florida, all students in the state, whether public, private, or home-schooled, can take courses free of charge from the Florida Virtual School. The virtual school is funded by a separate state appropriation and also receives revenues from leasing its courses out of state.

Equity and non-discrimination

- Policymakers should develop guidelines and safeguards to ensure equitable online learning opportunities for all public school students, not just those who are taking advanced courses or are skilled technology users. States and school districts should provide all students with the supports and technology skills necessary to learn online.

  - Maryland is developing a system to identify the reasons why a student might need a particular online course and give enrollment priority in online courses to students with the greatest needs.

  - Monte Vista Online Academy in Colorado is a public virtual school developed for at-risk students who weren't succeeding in regular classes. Online classes are small, and peer tutors help students with coursework.

- When developing new courses or selecting existing courses to offer, policymakers should target resources on subjects that serve the greatest number of students or the students with the greatest need of assistance.

  - West Virginia is developing language courses to meet the needs of schools unable to meet state requirements that all middle school students take a foreign language.

  - Massachusetts has established online tutoring assistance for students who need extra help to pass high school exit examinations.

- Policymakers should take care not to allow virtual schooling to become a watered-down way to address persistent teacher shortages in schools serving low-income, minority, or rural students.

  - The Michigan Virtual High School sees itself as a partner with local schools, not a competitor. Students are limited to taking two virtual courses per semester, taught by a Michigan-certified teacher with extra training in online instruction.

Public accountability and responsiveness

- Virtual schools that receive public money should be accountable to and overseen by public authorities, such as states or local school districts.

- The West Virginia Virtual School (WVVS), sponsored by the state education department, acts as a broker of online education for all the state's public schools. The WVVS identifies providers of high-quality online courses; evaluates and selects courses that are aligned with state standards and meet state guidelines for quality; and negotiates statewide prices for online education services.

- Parents and citizens should have input into policy decisions that affect the availability, operation, and funding of virtual schools in their communities. States and school districts should make public the average test scores, other student outcomes, and evaluation reports for all virtual schools.

  - The Virtual High School solicits end-of-course evaluations from students, teachers, and administrative personnel in participating school districts. These evaluations, along with any outside evaluations, are made public.

Religious neutrality

- Virtual schools that receive public funds should be held to the same principles of religious neutrality and respect for religious freedom as traditional public schools, such as prohibiting course content that endorses a particular religion.

  - An expert panel of the Virtual High School adopted a standard that any course content or material dealing with controversial issues, including religious or ethical issues, should be treated in a responsible manner, meaning that teachers do not discourage alternate viewpoints and make clear the difference between facts and opinions or beliefs.

I. Virtual Schools and Enduring Principles

CHALLENGES OF CHANGE

Public education is constantly evolving in response to broader changes in society. Changing demographics, advances in technology, charter schools, and reforms in academic standards and testing are shaking up traditional ways of organizing and delivering public education. One of the most remarkable trends is the rise of virtual or Internet-based schools, which are transforming basic ideas about what a school is, what a classroom is, when and where education occurs, and how instruction is delivered. With a computer, modem, and Internet access, a student enrolled in a virtual school can learn about a wide variety of subjects "any time, any place, any path, any place."[1] As part of a "networked learning community," students, no matter where they live, can communicate with teachers, peers, and experts around the world and can immediately access information from a multitude of sources.

Most public debates about innovations like virtual schools focus on how the proposed change will affect school governance, funding, and other structural features. Less attention is paid to how these changes could affect the deeper purposes and principles underlying the U.S. system of public education—the expectations and ideals that represent what most Americans want public education to do and to be.

While the Center on Education Policy (CEP) supports change that will improve public education and enhance student learning, we believe that policymakers and citizens should *explicitly* consider the impact of any proposed innovations on such fundamental purposes as citizenship preparation and such essential principles as equity. This process will help ensure that in a time of dramatic change, essential purposes and principles will be preserved or revised to meet new demands, while non-essential ones can be let go of.

To stimulate these conversations, CEP has developed a list of key questions for policymakers to ask about major education reforms, grouped according to what we believe are six essential purposes and principles of public education. *(See Table A in the Action Summary.)* These questions, purposes, and principles are the product of several meetings, focus groups, and discussions that CEP held around the country with policymakers, educators, parents, and others. The list takes into account the historical reasons why public education came into being and the continuing hopes that Americans hold for their schools. (A fuller discussion of this list appears in *Changing Schools, Enduring Principles,* a CEP publication available at www.cep-dc.org.)

THE INVITATIONAL CONFERENCE

Although virtual schooling has been the topic of several conferences during the last few years, none had examined virtual schools in the context of fundamental purposes and principles of public education. To encourage this kind of analysis, the Center on Education Policy sponsored an invitational conference on April 19, 2002, on the topic of "Virtual High Schools: Changing Schools, Enduring Principles."[2] *(See the Appendix for the conference agenda and list of participants).* Held in Washington, D. C., the conference brought together policymakers, educators,

[1] "Any time, any place, any path, any pace" is the registered trademark of the Florida Virtual School.

[2] Although this conference focused on virtual high schools, it should be noted that online courses and virtual schools are common in postsecondary education and can also be found at the elementary and middle school levels.

parents, technology leaders, and others for a day-long discussion.

At the conference, a panel of leading practitioners reviewed the status of state-supported virtual education in Florida and West Virginia and summarized what has been learned from experienced providers of online courses, including Apex Learning, a private vendor, and the Virtual High School (VHS, Inc.) created by the Hudson, Massachusetts, Public Schools and the Concord Consortium. In a follow-up presentation on the historical goals of American education, Professor Patricia Albjerg Graham of Harvard University characterized public schools as a place where the nation tries out new ideas for social organization before applying them to the broader society and transmits society's values to the next generation. For most of the rest of the day, conference participants held small-group discussions about the implications of virtual schooling for each of the six purposes and principles of public education identified by CEP.

II. An Overview of Virtual Schools

GROWTH OF VIRTUAL SCHOOLS

The terms "online school," "cyber school," "netschool," and "virtual school" are often used interchangeably to refer to educational organizations that offer K-12 courses through the Internet or Web-based resources.[3] Virtual schools (the term used in this report) and related forms of Web-based education have grown dramatically in recent years. According to a 2001 report by the Distance Learning Resource Network and WestEd, well over 100 virtual schools were in operation last year, a figure that doesn't include the numerous other providers of online courses not structured as schools. This same survey estimated that in academic year 2001-2002, between 40,000 and 50,000 K-12 students were enrolled in an online course.[4] Enrollments have probably increased since then, as the number of schools and offerings has continued to expand. A former administrator of the Virtual High School estimated that by 2006, a majority of high school students will have taken an online course before graduating.[5] It is not just technology advocates who predict dramatic increases. About 28 percent of school leaders surveyed by the National School Boards Foundation believe that in the next three years, one out of every five of their students will receive a *substantial portion* of their instruction over the Internet.[6]

Although virtual schooling implies a totally new approach to education, it is not as radical a change as some people might think. In such standard high school programs as service learning, school-to-work arrangements, and college course credit programs, students have already been learning in places outside the home school walls and in time frames outside the 9-3 classroom clock. And for the past 20 years or so, school districts have been using technology to give students access to courses not available in their local schools. The earlier technologies—satellite, microwave, cable, and broadcast television—had limitations related to cost, specialized equipment needs, and lack of interactivity that stood in the way of their wider use. The Internet has been the greatest force for change, the "killer app" for distance learning. With the development of multimedia Internet-based technologies and successful efforts to link virtually all schools to the Internet, distance education is now accessible to K-12 schools anywhere.

FEATURES OF VIRTUAL SCHOOLS

Virtual schools vary widely in their sponsorship, funding mechanisms, teacher requirements, course offerings, modes of delivering instruction, and other key features. Some virtual schools offer courses to enhance, supplement, or enrich existing curriculum, while others provide a complete online alternative to traditional schools. Some virtual schools deliver instruction synchronously, with students and teachers logging on at the same time each day, but most do it asynchronously, with students working at different times and occasionally having face-to-face meetings, phone conversations, or online chats with teachers and peers. Some structure their courses to fit into a standard school semester, while others allow students to complete courses at their own pace.

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3 This is the definition provided by the Distance Learning Resource Network (www.dlrn.org), a project sponsored by the U.S. Department of Education.

4 Tom Clark, *Virtual Schools: Trends and Issues*. Distance Learning Resource Network and West Ed, 2001,www.dlrn.org.

5 Ray Rose, presentation to *Linking Leadership to Learning: Putting PT3 Results to Work*, Vanderbilt University, October 20-22, 2001.

6 Kathleen Vail "A new kind of school" *American School Board Journal*, September 2002. The survey report is at www.nsbf.org/thereyet/index.htm.

Virtual schools offer courses in a wide variety of subjects, including core subjects such as basic or honors level English, science, social studies, and foreign languages; electives such as media studies, mythology, literature, and the Vietnam War; and arts, business, technology, vocational, and technical courses. Although Advanced Placement courses once dominated the field, they now represent just one sector of online offerings. In the Florida Virtual School, for example, AP courses constitute just 10 percent of the course offerings. Courses can be structured as complete courses, tutorials, units, or modules.

In most virtual schools, text, video, and online library resources provide the basis for readings and discussion. Assessments may take the form of traditional tests, written papers, or individual or group projects.

BENEFITS OF VIRTUAL EDUCATION

When effectively designed and implemented, virtual education can offer several benefits to K-12 schools and students. It can expand the range of course offerings in rural schools, small schools, and other schools that can't fill teacher vacancies or afford to hire teachers for courses with limited enrollments. It can help ease congestion in overcrowded schools.

Virtual schooling can increase educational options for hospitalized or homebound students, incarcerated youth, dropouts, young athletes in training for the Olympics, students who've been suspended or placed in alternative programs, students with work or child care responsibilities, or other atypical students for whom regular classrooms are not practical or effective. Online instruction can be a motivator for students with different learning styles, those who feel more comfortable communicating online than speaking up in class, or those who aren't succeeding in traditional classrooms. Virtual education can also expand course offerings for homeschooled students in states that choose to serve this population.

By extending learning time outside the traditional 180-day schedule, virtual education can offer students more flexible options for meeting curricular requirements. Students can take online courses in the summer or even "mini" one- or two-credit courses over spring or holiday breaks. Those who need to complete a required course but have a scheduling conflict during the school day can take the course online, in school, after school, or in the evening. Virtual education can also provide students with remediation, tutoring, or other help to meet content standards or pass high school exit exams.

Studies have identified some specific benefits of well-implemented virtual schools. SRI International's external evaluation of the Virtual High School, which has been in operation for six years, concluded that the school is "an authentic success story."[7] Students are taking courses that wouldn't otherwise be available; students, teachers, and parents express a high degree of satisfaction; and many students who've taken online courses are willing to repeat the experience. The study also noted some limitations of virtual schooling, described in the next section. Finally, an expert panel convened by SRI to rate a sample of VHS courses concluded in a 2000 report that the school offered high-quality curriculum content.[8]

At the same time, potential consumers of virtual schools should recognize that the quality varies. Not all are as successful or high in quality as those highlighted in this report.

[7] Andy Zucker, "Studying the virtual high school and other online high schools," *Presentation to Virtual High Schools: Changing Schools, Enduring Principles*, meeting of the Center on Education Policy, April 19, 2002.

[8] Kyo Yamashiro and Andy Zucker, *An Expert Panel Review of the Quality of Virtual High School Courses: Final Report* (Arlington, VA: SRI International, 1999).

LIMITATIONS OF VIRTUAL EDUCATION

Even when quality is high, virtual education has limitations. The SRI International evaluation of the Virtual High School found that the rates of dropouts and "stopouts" (students who are still enrolled but have stopped doing the course work) are higher than in face-to-face courses, and technology glitches can sometimes hinder instruction.[9] Compared with face-to-face courses, the interaction among students and between teachers and students in the school's virtual courses was less in quantity and lower in quality, both as reported by teachers and observed by evaluators.[10] In addition, experienced teachers in several virtual schools note that some aspects of face-to-face instruction can't be replicated online, such as studying children's faces to gauge their understanding, giving immediate feedback to students while they work, or using classroom theatrics to pique students' interest.

In short, virtual education is not for everybody or every situation. To be successful in a virtual school, a student must be able to work independently. Teachers must be willing to take on different roles, teach in different ways, and spend more time organizing. For subjects that have a strong visual component or require hands-on demonstrations or projects, online instruction may not be the best mode.

SPONSORS OF ONLINE SCHOOLS

Virtual schools are being sponsored by a range of entities, including states, school districts, charter schools, consortia, higher education institutions, for-profit companies, nonprofit organizations, and combinations of the above. Some of these schools develop their own courses, while others purchase, broker, or certify courses available from other online providers. This report focuses mostly on virtual schools supported by public funds and sponsored by public entities, although it also draws some lessons from the online education experience of the private sector.

State-sponsored schools

At last count, 32 states had some kind of online schooling or "e-learning" program. Several of these states have gone from approving and distributing courses created by others to a more formalized process of pulling together whole curricula into entities they now call "schools." As of 2002, 12 states and territories had full online high schools in place, with 5 more in the planning stages.[11] In most state-sponsored virtual schools, the state department of education underwrites the cost of developing or purchasing courses and pays the administrative costs and teacher salaries. Many state-sponsored virtual schools are available only to public school students, although a few, like Florida's, also offer courses to private school and home-schooled students.

Florida has committed $16 million to the Florida Virtual School (FLVS) since its inception in 1996. All teachers in this school have Florida certification, and its curriculum meets the state's academic content standards. All 67 Florida school districts are affiliated with FLVS, meaning that they can register their students at the virtual school at no cost to the district and will accept these credits for graduation. FLVS serves all Florida students—whether public, private, or home-schooled—free of charge. Starting with the 2002-2003 school year, out-of-state schools, including charter, private, and home schools, can also license Florida's courses to create their own virtual school or pay tuition to FLVS at the rate of $650 per credit.

West Virginia, a newer entrant to virtual schooling, lacks the personnel and resources to create a full

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9 Zucker, "Studying the virtual high school," op. cit.

10 Robert Kozma et al. *The Online Course Experience: Evaluation of the Virtual High School's Third Year of Implementation, 1999-2000* (Menlo Park, CA: SRI International, 2000). (www.govhs.org/Pages/About+Us-Project+Evaluation)

11 Vail, op. cit.

online curriculum but acts as broker of courses provided elsewhere. The West Virginia Virtual School evaluates, certifies, and negotiates statewide prices for online courses purchased from districts, other states, or commercial vendors. In subjects for which the state can't find courses that meet its standards or special needs, the state virtual school plans to develop its own.

District or consortia-sponsored schools

Local school districts also sponsor virtual schools that serve their own students and, in some cases, accept students from outside the district for a fee. The Virtual School of the Houston Independent School District, for instance, offers a full middle school curriculum for public school and home-schooled students who live in the district and provides AP courses for participating high schools. Mindquest, an alternative school run by the Bloomington, Minnesota, public schools, serves youth who have left high school but are seeking GED Fast Track, remedial work, and regular high school diplomas.

The Virtual High School is an example of a school established by a consortium of high schools, using funds from a federal innovation grant. The school was created in 1996 by the Hudson, Massachusetts, Public Schools and the Concord Consortium, a nonprofit educational research organization, but is now an independent organization called VHS, Inc. The Virtual High School uses a membership approach. Schools and districts wishing to enroll students in VHS pay a fee to participate in the consortium. Each member school or district must provide a teacher, who will teach a course to other students in the consortium after completing VHS online teacher training. These teachers receive release time from their home school for time spent teaching the online course.

Cyber charter schools

Cyber charter schools are virtual schools established through the charter school laws of a particular state or district. About 30 such schools are operating throughout the nation, attracting both interest and controversy. Pennsylvania alone has eight cyber charter schools.

As described in a report of the Southern Regional Education Board,[12] cyber charter schools differ from most state-sponsored virtual schools in key respects. Cyber charters typically deliver full academic programs for students, rather than individual courses. Many draw enrollments from across an entire state and serve large numbers of home-schooled students who were not previously enrolled in public schools. Students usually connect to cyber charters from their homes, and the schools rely heavily on parents to monitor instruction. As discussed in chapter III, controversies have bubbled up in some states about the funding and management of cyber charter schools.

Other providers of online education

For-profit companies also create and distribute online courses, operate their own virtual schools, or provide technical support for other virtual schools. For example, Apex Learning (www.apexlearning.com) collaborates with states and districts to provide the infrastructure, courses, and support services for state and local virtual schools. Specializing in Advanced Placement courses and exam reviews, Apex operates in 30 states, as well as overseas, and has been accredited.[13]

Several private online education programs have been developed to provide materials, coaching, and teaching support to parents of home-schooled children. These forms of facilitated home schooling are not virtual schools according to the definition used in this report, and are not the focus of this analysis.

12

[12] William R. Thomas. *Virtual Learning and Charter Schools: Issues and Potential Impact.* (Atlanta, GA: Southern Regional Education Board, 2002).

[13] Based in Seattle, Washington, APEX is accredited by the Northwest Association of Schools and Colleges.

III. Implementing Virtual Schools While Preserving Essential Principles of Public Education

Virtual schools look very different from the traditional schools that most of us attended and that still educate most American children. But what about the reasons why we have public schools? Are the purposes and principles underlying virtual schools different from those underlying other forms of public schooling? *Should* they be different?

The sections that follow discuss the implications of virtual schools for each of the six purposes and principles of public education developed by CEP. Each section raises key questions and issues for policymakers to consider in connection with a particular purpose or principle, and makes policy recommendations.

EFFECTIVE PREPARATION FOR LIFE, WORK, AND CITIZENSHIP

Key question:

- How can policymakers ensure that virtual schools will produce an education of the quality needed to effectively prepare young people: (a) to lead fulfilling and contributing lives, (b) to be productively employed, and (c) to be responsible citizens in a democratic society?

Academic preparation

Preparing students academically is the primary goal of online schooling. Generally speaking, if a virtual school—or any school—does a good job of preparing students academically, most graduates will be well on their way to becoming good workers and responsible citizens. How, then, can policymakers assure that virtual schools offer an academic program of high quality?

Some advocates of online education point out that brick-and-mortar schools don't always provide a high-quality education, so why should virtual schools in effect be held to a stricter standard? Others respond that with any educational innovation, it is healthy and appropriate for policymakers to be proactive and establish clear, reasonable expectations up front.

As a starting point, then, policymakers should judge publicly funded virtual schools by many of the same standards used to gauge the quality of traditional schools, but not by more stringent standards. This could include holding virtual schools to basic requirements regarding accreditation, teacher certification, appropriate student-teacher ratios, adequate instructional materials and resources, course content aligned with the state's academic standards, and adequate support services, such as counseling. Most public virtual schools today have received accreditation, or are seeking it, from the state in which they operate, from an appropriate regional accrediting agency like the Northwest Association of Schools and Colleges, or from an umbrella organization like the Distance Learning and Training Council.

In addition to these "input" measures, policymakers should establish outcome measures for publicly funded virtual schools, just as they are doing for traditional schools. These would include student scores on the appropriate external tests and might also include grades, course completion rates, dropout rates, or student performance on course projects and teacher-made assessments. Online students should be held to the same standards, such as passing state exit exams, as students in regular classrooms. (Most online courses have safe-

guards to ensure that the student of record is actually the one taking the test or submitting assignments. For example, many virtual schools require students to take tests in a designated site with a teacher or proctor.)

Some education organizations have established prototypes or guidelines that policymakers can use to develop quality indicators for virtual schooling. Examples include the *Essential Principles of Quality: Guidelines for Web-based Courses for Middle and High School Students* (www.sreb.org) developed by the Southern Regional Education Board, and the *Guide to Online High School Courses* (www.nea.org/technology/distanceed/highschool) developed by the National Education Association.

Specific quality indicators for virtual schools

Leaders in virtual education are also recognizing that certain policies established to ensure quality in traditional schools can be impediments to virtual schools and may need to be revised.

The most obvious examples relate to attendance and school calendars. States and districts are wrestling with alternative ways to ensure that online courses incorporate adequate time for teaching and learning. Traditional measures of "seat time"—requiring students to attend class for a given number of hours in a given number of weeks—lose their relevance when students can log into coursework any time of the day or night. Some states and school districts require a minimum number of online interactions as the measure of a student's "attendance" or participation. The Florida Virtual School has developed a pace chart for students that specifies the number of interactions per week and also requires teachers to telephone students and parents at least once a month to talk about the student's progress. Some states or districts require a minimum number of synchronous meeting times, although this can be problematic when courses cross state lines and students are in different time zones and have varying vacation schedules. Other virtual schools rely on teachers to establish participation requirements and use student achievement as the ultimate indicator of the program's quality.

Other policies that may need to be modified for virtual schools relate to the length of a course. With the flexible scheduling available in virtual schools, some students may progress quickly through a course while others will need more time. Rather than requiring all students to take a course for an entire semester or school year, some virtual schools certify that a student has passed a course when he or she demonstrates mastery of the course content.

Policymakers may need to establish additional indicators of quality unique to virtual schools. For example, valuable learning time is lost whenever a course site goes down or a student or teacher has difficulty accessing course material. To prevent this, virtual schools should assure that a designated agent, accountable to the virtual school, will provide adequate on-site instructional and technical support. To cite another example, providing high-quality course content for virtual schools involves more than just converting traditional course materials into electronic form. Instead, online education demands a different kind of course design, one rooted in an understanding of how children learn in this medium. When judging the quality of online courses, policymakers and school leaders may want to look at such factors as whether the course is sufficiently interactive and whether it makes effective use of the medium.

Teacher quality in a virtual environment

Teacher quality is just as important in virtual schools as it is in face-to-face schooling, if not more so due to the absence of face-to-face contact with school administration. In U.S. public schools, a basic measure of teacher quality is whether the teacher is certified in the state in which he or she is teaching. When teachers reach students across many states, as some online teachers do, it becomes unrealistic to require them to be certified in every state reached by the online course. What matters

most is whether the teacher has the appropriate content and grade-level certification. States like West Virginia that import courses for their virtual schools often recognize teaching credentials from another state, as long as the teacher is certified in the subject being taught.

To assure quality in online teaching, content and grade-level certification are not enough. Successful online teaching is very different from face-to-face teaching. Thus, quality indicators for virtual schools should include requirements for teacher preparation specifically tailored to online teaching. The Virtual High School requires all teachers who teach VHS classes to take a one-semester course, developed and provided by VHS, in online teaching. The course is available only online, so teachers experience firsthand what it means to be an online learner. In Kentucky, potential teachers for the Kentucky Virtual High School attended a four-day on-site training program, along with continuing online education, from the commercial provider eCollege. These sessions taught them how to develop and deliver online courses and skills for interacting in the online environment. Some higher education institutions also offer advanced certification for online teaching.

Preparation for life, work, and citizenship

The goals of preparing students for work, citizenship, and adult life are less often mentioned in discussions about virtual schooling. In the area of work skills, for example, some vocational and technical courses are available online, but they represent a small fraction of online offerings.

In one key respect, however, virtual schools help to prepare students for work by developing their technology skills. Communications technologies are dramatically changing how people in the workplace connect, especially those in higher-paying, high-demand technical and information fields. The skills of finding and sharing information online, collaborating at a distance, and manipulating digital resources are becoming highly valued in the workplace. Online courses give students firsthand experience with working and interacting in an online environment and can help them become more familiar, comfortable, and facile with various technologies. Students in virtual schools also gain practice in other skills prized in an information-based economy, such as doing research online, analyzing the credibility of information sources, respecting and protecting intellectual property, behaving ethically and courteously online, and expressing oneself clearly through a variety of text and visual media.

Some people may wonder whether it's more difficult to prepare students for citizenship in an online environment because of the limited opportunities for face-to-face contact. The next section discusses the socialization aspects of online education in more detail. A case can be made, however, that virtual schooling opens up other ways for students to develop citizenship skills. Students in virtual schools participate in online communities, with rules and responsibilities similar to those of any self-governing group, and this could help build their citizenship skills. Furthermore, students in online courses must find and analyze information from a variety of sources—television, radio, and online news services, discussion groups, and chat rooms. These skills are part of being an informed citizen in a democracy and can form the basis of civic awareness and participation in later life.

Recommendation:

- Policymakers should develop clear indicators for evaluating the quality of online education. Some of these indicators should be much the same as those used for traditional schools, such as student academic achievement, alignment of course content with state standards, course completion rates, and teacher qualifications. Others should be specific to online education, such as interactivity in course design, reliability of technology and technical support, and teachers' ability to teach in an online environment.

SOCIAL COHESION AND SHARED CULTURE

Key questions:

- Will virtual schools promote a cohesive American society by bringing together children from diverse backgrounds and encouraging them to get along?
- Will virtual schools help to form a shared American culture and to transmit democratic values?

Virtual schools and social goals of public education

Whether virtual schooling can fulfill the social purposes of public education is one of the greatest concerns about online education. Clearly, there exists a potential for harm with virtual schools if learning experiences are divorced from the social context and interactions necessary to build tolerance and understanding. Virtual schools raise questions about how important face-to-face interactions are to building social cohesion. Can online discussions and collaborative projects provide a different way of knowing and understanding students from varying backgrounds? Can these kinds of interaction help forge a shared culture? Although research is lacking in this important area, experience with existing virtual schools suggests steps that policymakers and school leaders might take to ensure meaningful social interactions in a virtual setting.

Building social interactions into online education

People often mention student isolation as a drawback of virtual education. Although online courses, by their nature, include fewer face-to-face interactions than traditional courses, they are far different from self-study or correspondence courses in which a student works alone and is not as a part of a class. Virtual schools use various techniques to encourage interactions between students and among students, teachers, and others.

To ensure that students have a mix of face-to-face and online educational experiences, virtual schools in Florida, Michigan, and elsewhere limit the number of online courses a student can take at one time. (The Florida Virtual School allows counselors to grant exceptions to this rule under special circumstances.) In addition, most virtual schools designate an on-site mentor or coordinator in the student's home school—often a certified teacher—who can monitor student progress, help with technology, serve as an intermediary between the home school and virtual school, and talk personally to students about a variety of concerns.

Some virtual schools encourage interactions between students by requiring all students to do projects involving teamwork, whether online or face-to-face. Other types of student-to-student interactions include online chats, video- or teleconferences, and "threaded" discussions (instant messaging systems that allow students to have back-and-forth exchanges in real time). These kinds of activities can also bring academic benefits; research shows that virtual schools are most effective when interaction is at the heart of the instructional design, and students are part of an active, sharing, learning community.[14] In fact, virtual schools often use the number and quality of student communications with the teacher and other students as a factor in the student's grade.

Like home-schooled children, students in virtual schools can also develop social skills through outside activities, such as sports, scouting, and community or church activities, where they can meet other students and adults who can help guide their social development. States and districts might consider requiring evidence of student involvement in face-to-face social learning experiences like these as a supplement to online schooling. Requiring students in virtual schools to participate in community service projects is another way to broaden their social perspectives.

14 Robert Kozma et al., op. cit.

Redefining community

Although students in virtual schools don't literally rub elbows, they have other ways of connecting with peers and teachers from backgrounds different from their own. This is especially true in virtual courses that enroll students from other districts or states. In online education, the community becomes a community of learners rather than a geographic community, creating new opportunities for students to learn about people, ideas, and values beyond those of their geographic base. These kinds of experiences can be particularly enriching for students from small or rural schools. In fact, some of the earliest online education projects, such as electronic pen pals and virtual field trips, were specifically designed to promote cross-cultural understanding.

The issue of "shared culture" has always been a challenge for a country as diverse as the United States. American culture is continually evolving, as the population changes and new groups contribute. Many face-to-face schools today are less like a melting pot, in which diverse cultures are blended, and more like a salad bowl, in which multiple cultures mix while keeping their identity. In the online community, diverse cultures should be respected and nurtured, and course content should reflect cultural diversity.

Some observers have raised a concern that virtual schools could allow for the ultimate customization and isolation—a boutique culture. Whether based around religious, political, ethnic, racial, gender, or any other definitions, such online schools, if allowed to flourish, would divide our society rather than promote a shared culture. Children could experience a greater isolation than geographic boundaries would produce, and intolerance might be the result. As discussed below, regulations promoting universal access and prohibiting discrimination in publicly funded virtual schools would prevent this from happening.

Recommendations:

- Policymakers should insist on frequent, regular, and timely interaction among online students, between online teachers and students, and with facilitators or on-site mentors in the home school to enhance student learning and social interaction.

- State or local administrators should set a maximum number of online courses a student can take in a semester or overall to meet graduation requirements, to assure that virtual education supplements but does not supplant a comprehensive public education experience.

UNIVERSAL ACCESS AND FREE COST

Key question:

- Will virtual schools guarantee a public education that is universally accessible to all children within the governing jurisdiction and is free of charge to parents and students?

Universal access in an online environment

Traditionally, universal access to public education has meant that a public school district must serve all children within its jurisdiction who desire a public education; it can't turn away students in the way that a private school can reject an applicant. In virtual schools, universal access means that all public school students in the jurisdictions served by the school—including low-income students, students with disabilities, and low-achieving students—have an equal chance to participate in online courses. (The related issues of equity and nondiscrimination are discussed in the next section.)

For low-income and some middle-income students, access to online courses may be limited by a lack of technology in the home. These students are at a dis-

advantage compared with their virtual classmates who have 24-7 access to home computers. Some schools or districts have addressed this situation by lending take-home laptops to students enrolled in online courses who need them. In some cases, it may be necessary to subsidize other expenses, such as home telephone lines, modems, Internet access, and monthly service charges. (This does not mean, however, that districts should be required to pay for technology for home-schooled students who participate in online courses at public expense.) Schools can also make special arrangements to let students work in computer labs after school, or form partnerships with community technology centers and neighborhood housing development computer sites.

The tuition and fees charged for some online courses present another barrier to universal access. When online courses are appropriate and necessary for a student's course of study, the school district or state (depending upon the funding structure for virtual education) should cover the cost of the student's participation in these courses. States and districts should also advertise courses offered by providers outside the local district, so that all students and parents are aware of their availability, prerequisites, and requirements for participation.

Access to virtual education for students with disabilities is another issue that requires attention. A first step is to make virtual courses more accessible to students with disabilities. Tools are available to highlight potential barriers in online content and suggest how content developers might revise courses to meet existing accessibility guidelines. The web accessibility software tool "Bobby" was created by the Center for Applied Special Technology (CAST), a nonprofit research and development organization that seeks to expand opportunities for people with disabilities through innovative computer technology.[15] In fact, the universal design principles benefit all students, not just those with disabilities. By encouraging designs that provide information in multiple formats (such as text, audio, and video), these principles can help reach students with various learning styles.

A broader issue is how the laws guaranteeing free public education for students with disabilities apply to an online environment. Sponsors of virtual schools must ensure that students with disabilities enrolled in virtual courses are receiving all the services laid out in the students' individualized education plan (IEP). Which services are best provided in traditional school settings and which can be provided effectively online are decisions that will have to be discussed as part of the IEP process. Virtual schools, such as cyber charter schools, that are the *primary* provider of education for a student with disabilities should be held to the same responsibilities for serving children with disabilities as any other public school.

Who pays the tab?

The question of how education is financed is one of the most central and controversial issues related to virtual schooling. Public schools are funded on a per student basis, determined through average daily attendance or other site-based measures of how much money a student brings to the district through his or her presence. Yet this model is an awkward fit for online schooling, which makes it physically possible for a student to take courses from multiple schools in multiple locations.

States are exploring a number of funding sources for online schools. These include separate funding trusts like the Maryland Virtual Learning Opportunities Fund, a continuing source of revenue made up of fees charge by the Maryland State Department of Education for online courses. The Fund is used to pay for online teacher salaries, course development, and administration. Other states and districts have found ways to use federal funds (such as Title I and other programs authorized under the No Child Left Behind Act, and Adult Education) to support online schools, matched by funds from state and local

[15] http://bobbywatchfire.com/bobby/html/en/about.jsp According to the website, "Bobby is a comprehensive web accessibility software tool designed to help expose and repair barriers to accessibility and encourage compliance with existing accessibility guidelines."

sources.[16] Experienced educators suggest that virtual schools begin early in the planning process to identify *sustainable* sources of funding.

Some policymakers may regard virtual schools as a way to save money, on the theory that they are cheaper to operate because they don't have buildings, maintenance, transportation, food service, and other costs of brick-and-mortar schools. But the promise of lower costs is premature, according to the SRI International study of the Virtual High School.[17] Moreover, start-up costs for virtual schools can be high: the infrastructure must be designed and installed, courses must be designed, teachers must be trained in online instruction, and on-site coordinators must be designated, among other costs.

States have adopted different policies regarding who must pay tuition for online courses. As already noted, the state of Florida pays tuition fees for all in-state students in the Florida Virtual School, whether public, private, or home-educated. In most other state- or locally-sponsored virtual schools, a public school student's home school district is responsible for paying some or all of that student's tuition costs to the virtual school. In fact, tuition fees form an important source of revenues for many virtual schools. In Kentucky, for example, school districts pay $275 per student for a one-half credit, one semester AP course and $500 for a full credit, two-semester AP course offered by the Kentucky Virtual High School. The West Virginia Virtual School covers 75 percent of the tuition for each student, and more for some students in high need-areas, with the district picking up the remaining 25 percent. In some states or districts, the students or their parents are asked to pay for online courses if the school or district determines the course is extracurricular in nature.

Traditionally, school districts do not pay for the education of children in private schools, nor do they receive average daily attendance support for private school or home-schooled children. In online education, however, some states and districts currently do cover the costs of online courses for private school children. With state appropriations, any student in Florida can take FLVS courses at no cost to the student (even if that student is home schooled) or to the school (even if a private school).[18] The Florida legislators considered it in the interest of the state to promote opportunities for all Florida students to participate in the best courses possible.

An issue fraught with controversy

In Ohio, Pennsylvania, and other states, the issue of who picks up the tab for home-schooled and private school children in virtual schools has become quite heated. In Ohio, public school districts have taken issue with funding policies for the Electronic Classroom of Tomorrow (ECOT), an Internet-based charter school supported with tuition paid by school districts throughout the state. In a model in which the tuition follows the child, state and local tax dollars that would have gone toward a child's education in a local public school are transferred to the charter school. With a current enrollment of 3,200 students, this has resulted in a major loss of funds for public schools, including funding for home-schooled or private school students that the public school would otherwise have kept. Furthermore, over the past two years ECOT received $362,000 in state funding that was targeted for reducing class size in disadvantaged school districts.[19] Many observers feel the support for online schools has no bearing to the class size reduction goals for which funding was intended.

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16 See, for example, William Thomas. *Funding Web-based Courses for K-12 Students to Meet State Educational Goals* (Atlanta, GA: Southern Regional Education Board, 2002).

17 Zucker, "Studying the virtual high school," op. cit.

18 William R. Thomas. Considerations for Planning a State Virtual School Providing Web-based Courses for K-12 Students (Atlanta, GA: Southern Regional Education Board, 2002). www.sreb.org

19 Dennis J. Willard and Doug Oplinger. "Charter school gets class-size incentives." The Beacon Journal, online posting April 30, 2002. www.ohio.com/mld/beaconjournal/news/local/3165676.htm.

In Pennsylvania, multiple lawsuits have been filed challenging the legality of cyber charters, particularly the policy of transferring public money from local school districts to cyber charter schools for home-schooled children. In at least one case, a Pennsylvania school district has revoked the charter of a cyber charter school, and the state legislature recently amended the laws governing support and operation of cyber charters.

In summary, funding policies for virtual schooling are challenging old patterns and assumptions about the demarcations between public and private schooling and the responsibilities of state and local authorities to pay for educational services for the children in their jurisdiction. These developments suggest the need for policymakers to set policies for virtual schools that clarify which students qualify for state or local funding, which costs are to be picked up by what entities, and which types of sponsors can receive public funding.

Recommendations:

- Policymakers should take aggressive steps to ensure all public school students have equal access to online courses. This should include covering the cost of online courses for low-income students and making available home computers, connections, and Internet access to low-income families.

- States, school districts, and Web-based course developers should make sure that course content, designs, and tools meet federal accessibility standards for students with learning or other disabilities.

- State policies should protect public school districts from losing funding to virtual charter schools or having to pay for the participation of private or home-schooled children they would otherwise not be supporting. States that choose to include home-schooled children in publicly funded virtual schools should provide separate funding for this purpose.

EQUITY AND NON-DISCRIMINATION

Key questions:

- Will virtual schools provide the same quality of education for poor children as for non-poor children?

- Will virtual schools treat all children justly and without discrimination based on race, ethnicity, gender, disability, religious affiliation, or economic status?

Nondiscrimination and equitable access

Any virtual school—public or private—that accepts public funding must guarantee that it does not discriminate by race, ethnicity, gender, disability, religion, or other categories protected by law. Non-discriminatory admission policies are just the first step. Ensuring equity in virtual education means developing course offerings that meet the needs of all students, not just the high-achieving or technologically adept. It may entail actively recruiting at-risk students or those in low-performing schools, or nudging students who never thought about online education to consider whether it could benefit them.

Equity for the full range of students

Many schools and districts see online education as a way to "level the playing field" by giving more students access to advanced college preparatory coursework and AP courses. For example, Kentucky funds a scholarship program, called the Commonwealth Diploma, that offers a need-based college scholarship to any student who receives a grade of 3 or better (on a 5 point scale) on four AP exams. The AP courses available through the Kentucky Virtual High School extend this scholarship opportunity to students who might otherwise have been excluded because their home schools don't offer AP courses.

But access for all to advanced courses is just one aspect of educational equity. Another critical aspect is providing online courses targeted at students who are not high-achieving and those with the greatest

educational needs. While virtual schools offer many advanced courses, fewer have developed courses for students who need remediation, for English language learners, or for students seeking vocational content. If a goal of virtual schooling is to improve education for the vast majority of students, rather than a select few, this situation must change. In situations where a district can only support a limited number of students in online courses, policymakers should develop methods for giving first priority for publicly funded enrollment slots to students with the greatest needs. Some virtual schools also offer summer courses to extend availability when academic year slots are overbooked.

States are taking steps to expand online education for at-risk and average students. The Florida Virtual School gives priority in enrollments to students in the lowest-performing public schools, based on the state's school rating system. The virtual school also offers courses like Algebra for middle school students that could strengthen academic preparation for at-risk students. The Michigan Virtual High School is charged with serving a broad population of students. In addition to AP and advanced math and science courses, the school offers such core courses as English 1 & 2, Pre-Algebra and Algebra, and American Government, as well as flexible courses in study skills, beginning composition, and many other areas.

Some virtual schools also provide remedial education, online tutoring, or test preparation for students who have fallen behind or need extra help. The accountability provisions of the federal No Child Left Behind Act are likely to heighten the demand for these services, and more online services could help fill a gap.

It has long been apparent that online courses demand a certain level of maturity, time-management skills, independence, and motivation. To assure that all students can succeed in online courses, schools may need to provide extra support, such as greater face-to-face involvement with a mentor or teacher. Schools should also begin early to teach all students the technology skills necessary to work and learn in an online course.

A new divide?

The equity issue has a flip side. If districts begin to view virtual schooling as a way to cut corners, save costs, or dodge long-term staffing challenges, a new kind of digital divide could emerge, whereby students in schools with persistent teacher shortages—who are disproportionately low-income, minority, or rural—may find themselves with online courses as their only option. In addition, safeguards are needed to ensure that teachers who are uncertified or teaching subjects for which they are not certified are not allowed to teach online courses. Although this sometimes occurs in traditional schools, there's no gain in extending this problem to the online environment.

Finally, as more online courses, both public and private, become available, costs and quality may vary to the degree that students in wealthy schools—or those with wealthy parents able to pay for the "top of the line" virtual courses—receive a better online education than students in poorer schools or from low-income families. If that occurs, virtual schooling will have worsened educational equity instead of improving it. Consistent quality controls and funding policies could help prevent this.

Recommendations:

- Policymakers should develop guidelines and safeguards to ensure equitable online learning opportunities for all public school students, not just those who are taking advanced courses or are skilled technology users. States and school districts should provide all students with the supports and technology skills necessary to learn online.

- When developing new courses or selecting existing courses to offer, policymakers should target resources on subjects that serve the greatest number of students or those with the greatest educational needs.

- Policymakers should take care not to allow virtual schooling to become a watered-down way to address persistent teacher shortages in schools serving low-income, minority, or rural students.

PUBLIC ACCOUNTABILITY AND RESPONSIVENESS

Key questions:

- Will virtual schools ensure that education supported with public dollars remains accountable to taxpayers and the public authorities that represent them?

- Will virtual schools be responsive to the needs of local communities and afford citizens a voice in the governance of their schools?

Public accountability

How can policymakers hold virtual schools accountable to the public? The experience of several states experienced in virtual education suggests that a public agency, such as a state or school district, is in the best position to oversee tax-supported online schools and hold them accountable to certain standards. Often the state is the most logical overseer, especially when the virtual school is a charter school or serves students from multiple school districts or home-schooled children. The school quality indicators and outcome measures described above, along with evidence of sound financial and management practices, could form the basis for this accountability.

Because virtual schools must attract enough "customers" to survive, regular evaluations are the norm in online education. Changes in response to evaluation findings can often be made quickly, making the schools more accountable to their consumers. If evaluations identify such problems as high dropout rates, low levels of participation, or poor academic outcomes, typically the course design is revamped, a new teacher is assigned to the course, or the class is dropped from the offerings in subsequent years. Many online schools, like the Virtual High School, ask students, teachers, and participating districts to complete end-of-course evaluations. The West Virginia Virtual School, which serves as a broker of online courses, uses course quality evaluations as a primary factor in determining which courses to approve for the state's students.

Public reporting of information is another element of public accountability. External evaluations, course and teacher evaluations, average test scores, and other student outcomes should be made public.

Community responsiveness

Although virtual schools, like other public schools, should be responsive to their local community, it is not always clear who constitutes the local community for an online school. On a broad level, the community could be the entire citizenry of the state or local jurisdiction that supports the school, the people whose tax dollars are subsidizing the school. Or, it could be the residents of the school districts that enroll students in the virtual school, because their local school allocations are paying for virtual education. On a more immediate level, it could be the parents of students who participate in the virtual school, who are directly affected by school policies and involved in helping their children with online studies. Depending on how a virtual school is structured and funded, it may be necessary to be attentive to all these constituencies.

Parents are a particularly important constituency for virtual schools, as noted in the NEA *Guide to Online High School Courses*.[20] Parents need to understand, among many things, how online education operates, how to communicate with teachers and course providers, what is expected of their children, and what is expected of them.

22

[20] National Education Association. *Guide to Online High School Courses* (Washington, DC: National Education Association, 2002). http://www.nea.org/technology/distanceed/highschool.

Not all parents are comfortable with technology. For these parents, the virtual environment could seem less responsive to their concerns than a traditional school. When the teacher or course provider is based in a distant community, parents may also feel disconnected from the virtual school or powerless to influence its policies. At the same time, technology opens up new ways for parents to interact with teachers and administrators, such as communicating through e-mail at the parent's convenience. Online education also produces a rich record of a student's interactions and products that can give parents a better understanding of how their children are progressing than the reports they would typically get in a traditional classroom.

Recommendations:

- Virtual schools that receive public money should be accountable to and overseen by public authorities, such as states or local school districts.

- Parents and citizens should have input into policy decisions that affect the availability, operation, and funding of virtual schools in their communities. States and school districts should make public the average test scores, other student outcomes, and evaluation reports for all virtual schools.

RELIGIOUS NEUTRALITY

Key question:

- Will virtual schools provide a public education that is religiously neutral and respectful of religious freedom?

Religious neutrality:

Virtual schools should not be held to different standards regarding religion than brick-and-mortar schools. If a virtual school—including those operated by private for-profit or nonprofit organizations—receives public funding, then it should maintain the same religious neutrality as traditional schools. As with face-to-face schooling, publicly funded virtual schools should not provide instruction that promotes one religious viewpoint to the exclusion of others.

If a course has content that touches on topics related to religion, as in a history or literature course, no particular religious preference or belief should be advocated. Some topics will necessarily be more controversial than others, especially when introduced in core curricular areas; examples include bioethics, Darwinian principles of biology, and other highly charged political and social issues. Any controversial issues or materials should be treated in a responsible manner, and teachers should make clear the difference between fact and opinion on controversial topics.

If a private institution affiliated with a religious group offers online courses for public high school students, then any religious courses or content should be clearly identified. In this situation, schools, parents, and students should be informed in advance about this material and how it is presented. As the number and variety of course providers grows, states and districts may need to be especially diligent in reviewing the online courses they support to assure that separation of church and state is maintained.

Online courses have the potential to build religious tolerance by providing students with information about religions and beliefs different from those in their geographic community. For example, while students in a small rural community may never have direct exposure to people of different religious traditions, this could occur in an online course. But it is critical that any religious discussions or information be presented in a nonjudgmental fashion, with no claims of superiority or endorsements of any particular religious belief.

Recommendation:

- Virtual schools that receive public funds should be held to the same principles of religious neutrality and respect for religious freedom as traditional public schools, such as prohibiting course content that endorses a particular religion.

Conclusion

America's system of free, nondiscriminatory, religiously neutral public education has been the lifeblood of our democratic society. As a nation we have been careful to fiercely protect basic principles of public education, while remaining open to new ideas that could improve education for students. Public education should rest on a solid foundation that is not buffeted by every fad or trend that comes into vogue.

Virtual schooling is an innovation in education that is clearly more than a fad. Like any innovation, it should be implemented with careful deliberation and good planning. The Center on Education Policy hopes that this report helps policymakers face the challenges and opportunities provided by virtual schooling. We hope that it stimulates continuing conversations about virtual schools and fundamental principles. Without these conversations, the landscape could change so quickly that essential principles could be compromised before people even realize it. With these conversations, virtual schools can thrive on a secure foundation.

Appendix

AGENDA

Virtual High Schools: Changing Schools, Enduring Principles

Center on Education Policy

Jury's Hotel, Washington, DC, April 19, 2002

8:00 a.m.	**Continental Breakfast**	Doyle A
8:30 a.m.	**Welcome and Goals for the Meeting** *Jack Jennings,* Director, Center on Education Policy	Doyle A
8:45 a.m.	**Virtual High Schools Today: Realities and Issues** **Introduction and Overview:** *Kathleen Fulton,* Director, Reinventing Schools for the 21st Century, National Commission on Teaching and America's Future **Panel Participants:** *Julie Young,* Executive Director, Florida Virtual School www.flvs.net *Donna Miller,* Coordinator, West Virginia Virtual High School www.virtualschool.k12.wv.us *Sue Collins,* Chief Education Officer, Apex Learning, www.apexlearning.com. *Andrew Zucker,* Program Manager, SRI International www.sri.com/policy/ctl/html/vhs.html	Doyle A
10:15 a.m.	**Break**	Doyle A
10:30 a.m.	**A Historical Perspective** Reactions from Patricia Albjerg Graham, Charles Warren Professor of the History of American Education, Harvard University	Doyle A
11:30 a.m.	**How Can We Assure that Virtual Schools Support Enduring Principles in American Education?** Charge to the Working Groups: Jack Jennings	Doyle A

12:00 p.m.	**Lunch**	Claddagh's Restaurant
1:00 p.m.	**Working Group Sessions**	
	Breakout Session 1	
	Effective Preparation for Life, Work, and Citizenship	Doyle A
	Breakout Session 2	
	Social Cohesion and Shared Culture	Westbury B
	Breakout Session 3	
	Universal Access and Free Cost	Westbury C
	Breakout Session 4	
	Equity and Non-Discrimination	Berkeley Room
	Breakout Session 5	
	Public Accountability and Responsiveness	Clifton Ford
	Breakout Session 6	
	Religious Neutrality	Board Room
2:45 p.m.	**Break**	Doyle A
3:00 p.m.	**Putting It All Together**	Doyle A
	Reporting Back from Working Groups	
	Jack Jennings and *Kathleen Fulton*	
3:45 p.m.	**Summary and Concluding Comments**	Doyle A
	Jack Jennings	
4:00 p.m.	**Adjourn**	

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Virtual High Schools: Changing Schools, Enduring Principles

Center on Education Policy

Jury's Hotel, Washington, DC, April 19, 2002

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